We claim:

1.   An isolated nucleic acid molecule comprising a polynucleotide chosen from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20; SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, and SEQ ID NO: 25.

2.   An isolated polypeptide encoded by a polynucleotide chosen from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20; SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, and SEQ ID NO: 25.

3.   An isolated nucleic acid molecule comprising a polynucleotide at least 95% identical to the isolated nucleic acid molecule of claim 1.

4.   An isolated nucleic acid molecule at least ten bases in length that is hybridizable to the isolated nucleic acid molecule of claim 1 under stringent conditions.

5.   An isolated nucleic acid molecule encoding the polypeptide of claim 2.

6.   An isolated nucleic acid molecule encoding a fragment of the polypeptide of claim 2.

7.   An isolated nucleic acid molecule encoding a polypeptide epitope of the polypeptide of claim 2.

8.   The polypeptide of claim 2 wherein the polypeptide has biological activity.

9.   An isolated nucleic acid encoding a species homologue of the polypeptide of claim 2.

10.   The isolated nucleic acid molecule of claim 1, wherein the nucleotide sequence comprises sequential nucleotide deletions from either the 5' end or the 3' end.

11.   A recombinant vector comprising the isolated nucleic acid molecule of claim 1.

12.   A recombinant host cell comprising the isolated nucleic acid molecule of claim 1.

13.   A method of making the recombinant host cell of claim 12.

14.   The recombinant host cell of claim 12 comprising vector sequences.

15.   The isolated polypeptide of claim 2, wherein the isolated polypeptide comprises sequential amino acid deletions from either the C-terminus or the N-terminus.

16.   An isolated antibody that binds specifically to the isolated polypeptide of claim 2.

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17. The isolated antibody of claim 16 wherein the antibody is a monoclonal antibody.

18. The isolated antibody of claim 16 wherein the antibody is a polyclonal antibody.

19. A recombinant host cell that expresses the isolated polypeptide of claim 2.

20. An isolated polypeptide produced by the steps of:

(a) culturing the recombinant host cell of claim 14 under conditions such that said polypeptide is expressed; and

(b) isolating the polypeptide.

21. A method for preventing, treating, modulating or ameliorating a medical condition comprising administrating to a mammalian subject a therapeutically effective amount of the polypeptide of claim 2 or the polypeptide of claim 1.

22. The method of claim 21, wherein the medical condition is a neuroinflammatory pathology or a neurodegenerative condition.

23. A method for preventing, treating, modulating, or ameliorating a medical condition comprising administering to a mammalian subject a therapeutically effective amount of the antibody of claim 16.

24. The method of claim 23, wherein the medical condition is a neuroinflammatory pathology or a neurodegenerative condition.

25. A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising:

(a) determining the presence or absence of a mutation in the polynucleotide of claim 1; and

(b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of said mutation.

26. The method of claim 25 wherein the pathological condition is a neuroinflammatory pathology or a neurodegenerative condition.

27. A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising detecting an alteration in expression of a polypeptide encoded by the polynucleotide of claim 1, wherein the presence of an alteration in expression of the polypeptide is indicative of the pathological condition or susceptibility to the pathological condition.

28. The method of claim 27 wherein the alteration in expression is an increase in the amount of expression or a decrease in the amount of expression.

29. The method of claim 27 wherein the pathological condition is a neuroinflammatory pathology or a neurodegenerative condition.

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30.   The method of claim 29 wherein the method further comprises the steps of: obtaining a first biological sample from a patient suspected of having a neuroinflammatory pathology or a neurodegenerative condition and obtaining a second sample from a suitable comparable control source;

(a)   determining the amount of at least one polypeptide encoded by a polynucleotide of claim 1 in the first and second sample; and

(b)   comparing the amount of the polypeptide in the first and second samples;

wherein a patient is diagnosed as having a neuroinflammatory pathology or a neurodegenerative condition if the amount of the polypeptide in the first sample is greater than or less than the amount of the polypeptide in the second sample.

31.   The use of the polynucleotide of claim 1 or polypeptide of claim 2 for the manufacture of a medicament for the treatment of a neuroinflammatory pathology or a neurodegenerative condition.

32.   The use of the antibody of claim 16 for the manufacture of a medicament for the treatment of a neuroinflammatory pathology or a neurodegenerative condition.

33.   A method for identifying a binding partner to the polypeptide of claim 2 comprising:

(a) contacting the polypeptide of claim 2 with a binding partner; and

(b) determining whether the binding partner effects an activity of the polypeptide.

34.   The gene corresponding to the cDNA sequence of the isolated nucleic acid of claim 1.

35.   A method of identifying an activity of an expressed polypeptide in a biological assay, wherein the method comprises:

(a) expressing the polypeptide of claim 2 in a cell;

(b) isolating the expressed polypeptide;

(c) testing the expressed polypeptide for an activity in a biological assay; and

(d) identifying the activity of the expressed polypeptide based on the test results.

36.   A substantially pure isolated DNA molecule suitable for use as a probe for genes regulated in a neuroinflammatory pathology or a neurodegenerative condition chosen from the group consisting of the DNA molecules identified in Table 1, having a 5' partial nucleotide sequence and length as described by their digital address, and having a characteristic regulation pattern in activated and unstimulated macrophages and microglia.

37. A kit for detecting the presence of the polypeptide of the claim 2 in a mammalian tissue sample comprising a first antibody which immunoreacts with a mammalian protein encoded by a gene corresponding to the polynucleotide of claim 1 or with a polypeptide encoded by the polynucleotide of claim 2 in an amount sufficient for at least one assay and suitable packaging material.

38. A kit of claim 37 further comprising a second antibody that binds to the first antibody.

39. The kit of claim 38 wherein the second antibody is labeled.

40. The kit of claim 39 wherein the label comprises enzymes, radioisotopes, fluorescent compounds, colloidal metals, chemiluminescent compounds, phosphorescent compounds, or bioluminescent compounds.

41. A kit for detecting the presence of a genes encoding an protein comprising a polynucleotide of claim 1, or fragment thereof having at least 10 contiguous bases, in an amount sufficient for at least one assay, and suitable packaging material.

42. A method for detecting the presence of a nucleic acid encoding a protein in a mammalian tissue sample, comprising the steps of:

(a) hybridizing a polynucleotide of claim 1 or fragment thereof having at least 10 contiguous bases, with the nucleic acid of the sample; and

(b) detecting the presence of the hybridization product.

43. A marker suitable for indicating an inflammatory response in the central nervous system comprising an isolated polynucleotide having a nucleotide sequence at least 90% identical to a sequence selected from the group consisting of:

(a) a polynucleotide fragment of SEQ ID NO: 1, 8, 10, 11, 14, and 18;

(b) a polynucleotide that is capable of hybridizing under stringent conditions to SEQ ID NO: 1, 8, 10, 11, 14, and 18;

(c) a polynucleotide fragment encoding a polypeptide fragment of a translation of SEQ ID NO: 1, 8, 10, 11, 14, and 18; and

(d) a polynucleotide fragment capable of hybridizing under stringent conditions to a polynucleotide fragment encoding a polypeptide fragment of a translation of SEQ ID NO: 1, 8, 10, 11, 14, and 18.

44. A kit for indicating an inflammatory response in the central nervous system comprising the marker of claim 43.

45. A method of indicating an inflammatory response in the central nervous system comprising the step of contacting a sample with the marker of claim 43.

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46. A marker suitable as a cell-specific marker for microglia comprising an isolated polynucleotide having a nucleotide sequence at least 90% identical to a sequence selected from the group consisting of:

(a) a polynucleotide fragment of SEQ ID NO: 1, 2, 13, 15, and 25;

(b) a polynucleotide that is capable of hybridizing under stringent conditions to SEQ ID NO: 1, 2, 13, 15, and 25;

(c) a polynucleotide fragment encoding a polypeptide fragment of a translation of SEQ ID NO: 1, 2, 13, 15, and 25; and

(d) a polynucleotide fragment capable of hybridizing under stringent conditions to a polynucleotide fragment encoding a polypeptide fragment of a translation of SEQ ID NO: 1, 2, 13, 15, and 25.

47. A kit for the specific detection of microglia comprising the marker of claim 46.

48. A method of detecting microglia in a sample comprising the step of contacting a sample with the marker of claim 46.

49. A marker suitable as a cell-specific marker for activated microglia comprising an isolated polynucleotide having a nucleotide sequence at least 90% identical to a sequence selected from the group consisting of:

(a) a polynucleotide fragment of SEQ ID NO: 18 and 24;

(b) a polynucleotide that is capable of hybridizing under stringent conditions to SEQ ID NO: 18 and 24;

(c) a polynucleotide fragment encoding a polypeptide fragment of a translation of SEQ ID NO: 18 and 24; and

(d) a polynucleotide fragment capable of hybridizing under stringent conditions to a polynucleotide fragment encoding a polypeptide fragment of a translation of SEQ ID NO: 18 and 24.

50. A kit for the specific detection of activated microglia comprising the marker of claim 49.

51. A method of detecting activated microglia in a sample comprising the step of contacting a sample with the marker of claim 49.

52. A marker suitable for indicating an autoimmune disease in the central nervous system comprising an isolated polynucleotide having a nucleotide sequence at least 90% identical to a sequence selected from the group consisting of:

(a) a polynucleotide fragment of SEQ ID NO: 8 and 11;

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(b) a polynucleotide that is capable of hybridizing under stringent conditions to SEQ ID NO: 8 and 11;

(c) a polynucleotide fragment encoding a polypeptide fragment of a translation of SEQ ID NO: 8 and 11; and

(d) a polynucleotide fragment capable of hybridizing under stringent conditions to a polynucleotide fragment encoding a polypeptide fragment of a translation of SEQ ID NO: 8 and 11.

53. A kit for indicating an autoimmune disease in the central nervous system comprising the marker of claim 52.

54. A method of detecting an autoimmune disease in the central nervous system comprising the step of contacting a sample with the marker of claim 52.

55. A marker suitable for indicating an inflammatory response in the central nervous system wherein the marker is an antibody specifically immunoreactive with a polypeptide fragment encoded by a polynucleotide having a nucleotide sequence at least 90% identical to a sequence selected from the group consisting of:

(a) a polynucleotide fragment of SEQ ID NO: 1, 8, 10, 11, 14, and 18;

(b) a polynucleotide that is capable of hybridizing under stringent conditions to SEQ ID NO: 1, 8, 10, 11, 14, and 18.

56. A kit for indicating an inflammatory response in the central nervous system comprising the marker of claim 55.

57. A method of detecting an inflammatory response in the central nervous system comprising the step of contacting a sample with the marker of claim 55.

58. A marker suitable as a cell-specific marker for microglia wherein the marker is an antibody specifically immunoreactive with a polypeptide fragment encoded by a polynucleotide having a nucleotide sequence at least 90% identical to a sequence selected from the group consisting of:

(a) a polynucleotide fragment of SEQ ID NO: 1, 2, 13, 15, and 25;

(b) a polynucleotide that is capable of hybridizing under stringent conditions to SEQ ID NO: 1, 2, 13, 15, and 25.

59. A kit for the specific detection of microglia comprising the marker of claim 58.

60. A method of detecting microglia in a sample comprising the step of contacting a sample with the marker of claim 58.

61. A marker suitable as a cell-specific marker for activated microglia wherein the marker is an antibody specifically immunoreactive with a polypeptide fragment encoded by a

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polynucleotide having a nucleotide sequence at least 90% identical to a sequence selected from the group consisting of:

(a) a polynucleotide fragment of SEQ ID NO: 18;

(b) a polynucleotide that is capable of hybridizing under stringent conditions to SEQ ID NO: 18.

62. A kit for the specific detection of activated microglia comprising the marker of claim 61.

63. A method of detecting activated microglia in a sample comprising the step of contacting a sample with the marker of claim 61.

64. A marker suitable for indicating an autoimmune disease in the central nervous system wherein the marker is an antibody specifically immunoreactive with a polypeptide fragment encoded by a polynucleotide having a nucleotide sequence at least 90% identical to a sequence selected from the group consisting of:

(a) a polynucleotide fragment of SEQ ID NO: 8 and 11;

(b) a polynucleotide that is capable of hybridizing under stringent conditions to SEQ ID NO: 8 or 11.

65. A kit for indicating an autoimmune disease in the central nervous system comprising the marker of claim 64.

66. A method of detecting an autoimmune disease in the central nervous system comprising the step of contacting a sample with the marker of claim 64.

67. The use of the polynucleotide of claim 1 for the detection of a pathological condition or susceptibility to a pathological condition comprising determining the presence or absence of a mutation in the polynucleotide of claim 1.

68. The method of claim 67 wherein the pathological condition is a neuroinflammatory pathology or a neurodegenerative condition.

69. The use of the polypeptide of claim 2 for the detection of a pathological condition or susceptibility to a pathological condition comprising determining an alteration in the expression of a polypeptide of claim 2.

70. The method of claim 69 wherein the alteration in expression is an increase in the amount of expression or a decrease in the amount of expression.

71. The method of claim 69 wherein the pathological condition is a neuroinflammatory pathology or a neurodegenerative condition.

72.   The use of the marker of claim 43 for the detection of an inflammatory response in the central nervous system comprising the step of contacting a sample with the marker of claim 43.

73.   The use of the marker of claim 52 for the detection of an autoimmune disease in the central nervous system comprising the step of contacting a sample with the marker of claim 52.

74.   The use of the marker of claim 55 for the detection of an inflammatory response in the central nervous system comprising the step of contacting a sample with the marker of claim 55.

75.   The use of the marker of claim 64 for the detection of an autoimmune disease in the central nervous system comprising the step of contacting a sample with the marker of claim 64.

76.   A method for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system comprising administrating to a mammalian subject a therapeutically effective amount of an antibody specific for human AA543723.

77.   A method for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system comprising administrating to a mammalian subject a therapeutically effective amount of an antibody specific for myelin basic protein.

78.   A method for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system comprising administrating to a mammalian subject a therapeutically effective amount of an antibody specific for glutathione peroxidase.

79.   A method for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system comprising administrating to a mammalian subject a therapeutically effective amount of an antibody specific for human AA183527.

80.   A method for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system comprising administrating to a mammalian subject a therapeutically effective amount of an antibody specific for human AA271535.

81.   A method for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system comprising administrating to a mammalian subject a therapeutically effective amount of an antibody specific for glucocorticoid-attenuated response gene 49.

82.   A method for preventing, treating, modulating or ameliorating an autoimmune disease in the central nervous system comprising administrating to a mammalian subject a therapeutically effective amount of an antibody specific for myelin basic protein.

83. A method for preventing, treating, modulating or ameliorating an autoimmune disease in the central nervous system comprising administrating to a mammalian subject a therapeutically effective amount of an antibody specific for human AA183527.

84. The use of an antibody specific for human AA543723 for the manufacture of a medicament for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system.

85. The use of an antibody for myelin basic protein for the manufacture of a medicament for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system.

86. The use of an antibody specific for glutathione peroxidase for the manufacture of a medicament for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system.

87. The use of an antibody specific for human AA183527 for the manufacture of a medicament for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system.

88. The use of an antibody specific for human AA271535 for the manufacture of a medicament for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system.

89. The use of an antibody specific for glucocorticoid-attenuated response gene 49 for the manufacture of a medicament for preventing, treating, modulating or ameliorating an inflammatory response in the central nervous system.

90. The use of an antibody specific for myelin basic protein for the manufacture of a medicament for preventing, treating, modulating or ameliorating an autoimmune disease in the central nervous system.

91. The use of an antibody specific for human AA183527 for the manufacture of a medicament for preventing, treating, modulating or ameliorating an autoimmune disease in the central nervous system.